

2 introducing sterile air.

1 37. (Original) The method of claim 33, wherein the sterilant is hydrogen peroxide.

1 38. (Original) Apparatus comprising:

2 means for providing a plurality of containers in a sterilization tunnel;

3 means for providing a plurality of sterilant concentration zones within the  
4 sterilization tunnel; and

5 means for providing a plurality of gas flow rates within the sterilization tunnel.

#### REMARKS

Claims 1-38 are currently pending. Applicant has canceled claims 4 and 34 and amended claims 1, 3, 5, 17, 33 and 35 to more clearly clarify the invention.

Claims 1-38 are again rejected under 35 U.S.C. 103(a) as being obvious over Kelbrick et al. in view of Muys et al. Applicant respectfully traverses the rejection as follows.

The Examiner contends that "Kelbrick et al intrinsically discloses a similar device to sterilize containers using multiple numbers of nozzle sprayed with hydrogen peroxide at different levels of concentration..." Further, the Examiner contends that this "plurality sterilant concentration" of Kelbrick et al. is made by the passing of time. [ "[T]he initial concentration of hydrogen peroxide would change from the nozzle to the container since it is diluted with air as time increases." ] The Kelbrick at al. patent describes a system completely different than the subject invention. Kelbrick et al. fails to teach or suggest, *inter alia*, **"at least one partition forming a plurality of zones within a sterilization tunnel having different sterilant concentration levels,"** as recited in claim 1. Kelbrick et al. fails to teach or suggest, *inter alia*, **"...at least one partition forming a plurality of sterilant concentration zones within the**

sterilization tunnel” as recited in claim 3. Kelbrick et al. fails to teach or suggest, *inter alia*, “...at least one partition forming a plurality of sterilant concentration zones within the sterilization tunnel,” as recited in claim 17. Kelbrick et al. fails to teach or suggest, *inter alia*, “...providing a plurality of sterilant concentration zones within the sterilization tunnel,” and “...providing at least one partition for forming said sterilant concentration zones”, as recited in claim 33. Furthermore, Kelbrick et al. fails to teach or suggest, *inter alia*, **“means for providing a plurality of sterilant concentration zones within the sterilization tunnel,”** as recited in claim 38. Accordingly, Applicant submits that independent claims 1, 3, 17, 33, and 38 are allowable.

Kelbrick et al. (col. 3, lines 26-29) discloses “[T]he various pressures within the machine cabinet 11 preferably have the relationship to one another as  $P1 > P2 > P3 > P_A$ , where  $P_A$  is the ambient atmospheric pressure. Kelbrick et al. discloses various pressures and fails to teach or suggest a plurality of sterilant concentration zones formed by partition(s).

Accordingly, Applicant submits that independent claims 1, 3, 17, 33, and 38 are allowable.

The Examiner contends that “...Hoshino fails to disclose that bottles can be sterilized using this method. On the other hand, Muys et al intrinsically discloses that bottles are sterilized by using a similar method as taught by Kelbrick et al. Further, it would be obvious to modify the invention so that the device can have four nozzles spraying the hydrogen peroxide gas at different rates where the concentrations differ in each nozzle. Clearly, the combination of these two references is similar to the claimed invention. Therefore, it would have been obvious of one having ordinary skill in the art at the time that the invention was made to modify the device in order to effectively sterilize the bottles.” Applicant respectfully traverses the rejection as follows.

Hoshino fails to teach or suggest, *inter alia*, "... wherein the **containers are bottles**," as recited in claim 16. Furthermore, Hoshino fails to teach or suggest, *inter alia*, "...wherein the **containers are bottles**," as recited in claim 32. Hoshino (col. 1, lines 15-16) discloses "...open-top containers or packages being fed in one or more files." Furthermore, Hoshino (col. 5, lines 21-24) discloses "...each open-top container 13 for use with this apparatus is generally **frustoconical in shape, tapering downwardly**. An annular flange or rim 22 projects outwardly from its top." Additionally, Hoshino in Figures 1-4, and 6-8 illustrates the container in the shape of a cup. Muys et al. fails to teach or suggest, *inter alia*, "wherein the **containers are bottles**," as recited in claims 16 and 32. Muys et al. (col. 3, lines 55-57) discloses "[W]hen employing a mixture of ambient air and air from a **compressed air bottle**..." Muys et al. discloses that air is being supplied from a compressed air bottle and does not teach or suggest that the container is a bottle. In fact, Muys et al. (col. 5, line 11) discloses "...in **glass jars** having a neck opening of 60mm..." Additionally, Muys et al. illustrates the container in the shape of a **jar** in FIG. 1 and the container in the shape of a **cup** in FIGS. 2, 3, and 5. Thus, Hoshino and Muys et al. fail to teach or suggest that the container is a bottle. Accordingly, Applicant submits that 16 and 32 are allowable.


As presented in the arguments above, Applicant asserts that independent claim 1 is allowable. Thus, Applicant respectfully submits that claim 2 which is dependent on 1 is allowable. Applicant asserts that independent claim 3 is allowable. Thus, Applicant respectfully submits that claims 5-16 that are dependent on claim 3 are allowable. Applicant asserts that independent claim 33 is allowable. Thus, Applicant respectfully submits that claims 35-37 that are dependent on claim 33 are allowable. Applicant asserts that independent claim 38 is allowable.

## CONCLUSION

In summary, based on the preceding arguments, Applicant respectfully believes that all independent claims and dependent claims meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicant invites the Examiner to contact Applicant's representative at the telephone number listed below.

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